COMMITTEE WORKSHOP

BEFORE THE

CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
2006 Renewable Energy Investment Plan	)	Docket No.
	)	
Re: Staff Draft Report	)	
	)	

CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

MONDAY, NOVEMBER 14, 2005

9:02 A.M.

Reported by:
Peter Petty
Contract No. 150-04-002

COMMISSIONERS PRESENT

John Geesman, Presiding Member

Jackalyne Pfannenstiel, Associate Member

ADVISORS PRESENT

Melissa Jones

Timothy Tutt

STAFF PRESENT

Pamela Doughman

ALSO PRESENT

Les Guliasi
Pacific Gas and Electric Company

Pete Price
Bergey Windpower

Gary Schoonyan
Southern California Edison Company

Jane Turnbull
League of Women Voters

Andrew Kruse
Southwest Windpower

Mark Johnson
Golden Sierra Power, Inc.

Steven Kelly
Independent Energy Producers Association

Matthew Freedman, Attorney
The Utility Reform Network

Lori A. Glover
S.O.L.I.D. USA, Inc.

ALSO PRESENT

Steve Munson
Vulcan Power (via teleconference)

John Galloway
Union of Concerned Scientists (via teleconference)

Kip Kunts
Seawest WindPower (via teleconference)

Joe Kloberdanz
San Diego Gas and Electric Company
(via teleconference)

Jack Pigitt
Calpine Corporation (via teleconference)

Robert W. Hammon
ConSol

I N D E X

I N D E X

P R O C E E D I N G S

9:02 a.m.

PRESIDING MEMBER GEESMAN: This is a meeting of the California Energy Commission's Renewables Committee on the 2006 Renewable Energy Investment Plan.

I'm John Geesman, the Presiding Member of the Commission's Renewables Committee. To my left, Commissioner Jackalyne Pfannenstiel, the Associate Member. To my right, Melissa Jones, my Staff Advisor.

What we had planned is a presentation of the staff draft investment plan; an opportunity to take public comments. We're then going to ask for written comments to be filed with us by November 21st.

We envision publishing a Committee-recommended investment plan in early January that will be taken before the full Commission for consideration at the January 18th business meeting.

So, with that, Commissioner Pfannenstiel. Pam.

MS. DOUGHMAN: Just a reminder, please don't use the doors that are alarmed to this side

of the hearing room. To exit the building, if you need to exit the building, please come out the doors near the security guard's desk. And the restrooms are near these alarmed doors. And that's all I have by way of housekeeping.

Let's go ahead and get started. Today we're talking about the staff draft 2006 Renewable Energy Investment Plan. And the report is available at the desk as you enter the hearing room. It's also available on the website listed here.

And this just goes over the schedule that Commissioner Geesman mentioned. Today we're going to have an overview of the staff draft report and then open the floor for public comments. Written comments are due November 21st. We plan to publish the final Committee report on January 3rd. And bring the 2006 Renewable Energy Investment Plan to the business meeting on January 18th for the Commission to consider adopting.

In early February we plan to deliver the report to the Legislature. The report is due to the Legislature on or before March 31, 2006.

The 2006 Renewable Energy Investment Plan recommends an allocation of renewable energy

program funds collected from January 1, 2007 to January 1, 2012. The investment plan is required by Public Utilities Code sections 399 and following. This portion of the Public Utilities Code codifies Senate Bill 1194 and Assembly Bill 995.

The staff draft report is based on policy direction from the Governor's response to the California Energy Commission's 2003 Energy Report and 2004 Energy Report Update. It also is based on the Energy Commission's 2005 Energy Report, the Committee draft. And the report also is based on recent payment histories from each of the program elements of the renewable energy program, as well as staff analysis.

These three figures illustrate the status of renewable energy in California. Figure 1 shows the amount of electricity generation that is used to meet California load from eligible renewables in comparison to other energy sources.

Figure 2 breaks out the different resource types for renewable energy, showing that geothermal provides the largest amount of renewable energy, eligible renewable energy currently.

And figure 3 shows the cumulative grid-connected photovoltaic capacity; this is distributed generation photovoltaic capacity. And California is in orange; and then Germany and Japan.

Although the amount of electricity from renewable resources has increased, the percentage of renewable energy has dropped from 11 percent in 2002 to 10.6 percent in 2004. Distributed generation PV capacity is growing quickly, but is still behind Japan and Germany.

This slide shows the proposed percentages in the staff draft report for funds collected between January 1, 2007 and January 1, 2012. It shows previous allocations for comparison.

But essentially this column here is what we're here to talk about today. The staff recommend allocation 38 percent to the RPS incentive program, and 48 percent to the emerging renewables program, 4 percent to the consumer education program, and 10 percent to existing renewables.

This table shows the same information, but rather than percentages it shows it in dollar

amounts.

So, the staff proposed 266 million for the RPS incentive program; 336 for the emerging renewables program; 28 million -- that's 336 million for the emerging; and 28 million for the consumer ed program; and 70 million for existing renewables, bring the total to 700 million. And this assumes that 140 million would be collected each year.

The remainder of my presentation goes over each of the program elements in greater detail starting with the new renewable facilities program. Staff suggests renaming this program to the renewables portfolio standard incentive program.

And we recommend 38 percent be allocated for RPS production incentives, also known as supplemental energy payments. The rationale for this recommendation is that staff looked at the RPS contracts signed through October 2005 and these contracts did not need supplemental energy payments. Also the high cost of natural gas is expected to continue, and this reduces the need for supplemental energy payments.

In addition, staff suggests greater

flexibility to reallocate funds if market conditions change. Staff also recommends changing the structure of the supplemental energy payments allocation mechanism. We suggest changing it to competitive auctions. And the rationale for this is that the auction award -- or the rationale is that this would reduce complexity and increase transparency of the allocation of SEPs. The auction award would be conditioned upon receiving a renewable portfolio standard contract.

The Energy Commission would design the auctions to build on the success of auctions held between 1998 and 2001 under the new renewable program.

In addition, staff recommends that the market price referent be discontinued. If it is continued, then it would be used for reasonableness only. It would not be used for allocating SEPs. There are other approaches for judging whether the RPS contracts are reasonable. And those other options may be more efficient than the market price referent, which to date has required quite a bit of time from stakeholders and -- time and resources.

This table shows or summarizes the

auction results for the new renewable resources. There were three auctions held between 1998 and 2001. And the main point I want to bring to your attention is that the small hydro, biomass and digester gas resource types had the highest percentage of winning bids that actually received contracts and have come online.

This table shows the investor-owned utility RPS contracts for new or repowered renewables by technology. We can see that so far solar thermal electric has received two contracts which provide the largest proportion of the megawatts to date.

Moving to the emerging renewables program, staff recommends allocating 48 percent of the funds collected between January 1, 2007 and January 1, 2012 for incentives to support the Governor's million solar roofs initiative.

The CPUC and the Energy Commission are working to advance the Governor's goals through existing statutory authority if pending legislation does not become law. And the effort is called the California Solar Initiative.

The Governor's goal is to achieve 3000 megawatts of photovoltaics in the next ten years.

This allocation of funds would provide about half of the first five years of incentives for the California Solar Initiative. This is based on the lower estimate, which is 1.1 billion, for the cost of the California Solar Initiative.

But this program is still under development and there's still pending legislation on this topic. So flexibility is needed to respond to changes in the California Solar Initiative, as well as changes in market conditions. The CPUC is expected to issue a decision on the California Solar Initiative before the end of 2005.

This allocation includes money to repay the $60 million borrowed from future collection of renewable energy program funds as authorized under Assembly Bill 135.

Regarding the existing renewables program, or I should say the existing renewable facilities program, staff recommends 10 percent of the funds collected between January 1, 2007 and January 1, 2012 be allocated for production incentives for existing solid fuel biomass facilities.

Existing wind facilities have been

competitive during the past two fiscal years and have not required incentives from the existing renewable facilities program. Payments for existing solar thermal electric facilities for 2004 were about 1.5 million; and in 2003 they're about 1.4 million.

Two RPS contracts have been signed for new facilities using solar thermal energy. Neither contract requires supplemental energy payments, indicating that this capital-intensive technology can succeed without support from the renewable energy program.

Compared to new facilities exiting solar thermal electric facilities built in the 1980s should have lower costs because payments for capital cost should be nearly complete.

Payments from the existing renewable facilities program for solid fuel biomass facilities were about 17 million for 2004, and 16 million for 2003. Average payments in the past 12 months range from .33 cents per kilowatt hour to 1 cent per kilowatt hour.

IOU RPS contracts using solid fuel biomass have been signed without supplemental energy payments. The levelized costs for new

megawatts fluidized bed biomass are estimated to be using constant 2005 dollars, 7.1 cents per kilowatt hour for new plants online in 2005; 6.9 cents per kilowatt hour for 2007; and 5.9 cents per kilowatt hour for new plants online in 2010.

Staff expects that costs would be lower for older plants that have already repaid their capital debt.

Excluding existing renewable facility program incentives and the federal production tax credit, staff estimates that existing solid fuel biomass facilities receive about 7.37 to 7.87 cents per kilowatt hour on average from energy and capacity payments.

However, the capacity payments are concentrated in the summer peak and partial peak portion of the year.

The federal PTC is expected to be about 0.475 cents per kilowatt hour, or 0.95 cents per kilowatt hour for open-loop biomass based on specified criteria. Eligibility for the federal production tax credit for open-loop biomass begins at 2005, and these amounts will be adjusted annually.

Regarding consumer education, the staff

recommends that 4 percent be allocated for consumer information, outreach and marketing efforts to support the Governor's goal of ramping up to 3000 megawatts of distributed generation PV, the Western Renewable Energy Generation Information System, and other consumer information and market support activities.

To achieve 3000 megawatts of distributed generation photovoltaics California will need to install on average almost 300 megawatts per year for the next ten years.

Information and market support activities are needed to encourage and assist newcomers to enter the solar energy market and provide continued assistance to current market participants. The WREGIS will track renewable energy certificates created by RPS-eligible energy generated within the Western Electricity Coordinating Council, and is expected to be operational in early 2007.

The Energy Commission plans to use North American Electricity Reliability Council TAGS, tags from the North American Electricity Reliability Council, in conjunction with the WREGIS to verify delivery of RPS energy into

California.

And as mentioned previously, staff suggests a new name for this allocation. We suggest that it be changed from consumer education to consumer information and market support.

In addition I just have a few other topics to briefly go over. Rollover of remaining funds. Staff recommends rolling over any remaining funds available at the close of 2006 into money available for expenditure between January 1, 2007 and January 1, 2012. And the rest of the slide details how we recommend allocating remaining funds and rolling them over.

This slide talks about the need for continued flexibility to adjust to market conditions. Senate Bill 1038 restricts reallocation of funds from the new renewable facilities program element. Staff recommends that this restriction be removed to adjust to changing market conditions.

Likewise, staff recommends allowing funds to be added to the existing renewable facilities program to maintain maximum flexibility to respond to market conditions.

For January 1, 2007 to January 1, 2012,

staff recommends that program eligibility criteria, distribution methods and reallocation of funds continue to be developed through guideline; and reallocation decisions are reported in the annual report, as required by Assembly Bill 2304.

(Pause.)

MS. DOUGHMAN: This slide just shows some references that you can look at, and some links as to where you can find them.

And then, just to reiterate, you can call in and the passcode is investment plan. And written comments are due November 21st.

That's all I had.

PRESIDING MEMBER GEESMAN: I might have a question. I understand the staff recommendation with respect to the MPR and SEP structure, and in fact, the Committee draft of the IEPR discuses that at some length.

Is that a necessary element of the investment plan? Is that something that needs to be resolved on the timeframe that the investment plan is on?

MS. DOUGHMAN: The short answer is no. But looking and putting this investment plan together we looked at previous investment plans

and we saw that if there was a recommended change in program structure, it was often included in the investment plan. So that's why we put it there.

But clearly, we could have a decision on the allocation of resources separate from the decision as to whether to change the structure of the program.

PRESIDING MEMBER GEESMAN: In the allocation of resources that your draft recommendations have made, does it rely on a restructuring of the MPR and SEP framework to support the allocations that you've come up with?

MS. DOUGHMAN: No. We looked at the high cost of natural gas, and also the number of contracts that have been signed without supplemental energy payments to determine that the reduction in the amount of money allocated to support supplemental energy payments would be recommended.

PRESIDING MEMBER GEESMAN: The reason I ask that, the draft, I guess we're calling it the Committee final draft, the IEPR that we posted last Monday night, contemplates the Energy Commission and the PUC jointly looking at the MPR SEP structure over the course of 2006, and then

making recommendations at the end of 2006.

I'm not certain that there's any reason to try and pretend that we can successfully resolve those questions earlier. I mean there's some pretty knotty issues involved there that I think will probably take awhile to resolve. And in the interest of jointly addressing these questions with the CPUC, my guess is that it would probably be best to take that off the table in terms of the investment plan.

But I think you've done a good job of clearly communicating what the staff's view is.

MS. DOUGHMAN: Thank you.

ASSOCIATE MEMBER PFANNENSTIEL: I just have one question of clarification. The emerging renewable number of 336 million, you say that that includes the payback of the 60 million. Does that mean that that 60 million has already been deducted from that, or is yet to be deducted from that?

MS. DOUGHMAN: Is yet to be deducted from that. What we did there is we looked at the anticipated cost for the California Solar Initiative of 1.1 billion. That was the lower end of the range.

And then we looked at how much money would we need over five years to cover half of that. And then we added 60 million to that amount. That's how we came up with 336 million.

ASSOCIATE MEMBER PFANNENSTIEL: Okay, I got that, thanks.

PRESIDING MEMBER GEESMAN: Why don't we go to any public comments that we may have. Les.

MR. GULIASI: Thank you and good morning. Les Guliasi with Pacific Gas and Electric Company. Thanks for the opportunity to speak today. What I'm about to say I want you to treat as preliminary because we want to take some more time to analyze the staff recommendations more carefully, and we'll submit written comments that I think will be a little bit more thoughtful than the brief remarks I want to make today.

Perhaps the best place to start is with a question that you raised, Commissioner Geesman. I think you're absolutely correct that you can separate the recommendations regarding the reallocation of funds from the other questions about the supplemental energy payment program and the like.

The report that you have before you and

the recommendations that you're going to make to the Legislature will have a significant impact, as you know, on the program for the next five-year period. It's a large sum of money. We're talking about, you know, $700 million over that period of time.

And with a decision of that size and magnitude I think caution and prudence dictates the course of action here.

I can appreciate, from where you sit, looking at the program to date. You've heard a great deal of frustration expressed from parties before you. I think you make some wise remarks in your Energy Report. And I think you point out some of the imperfections with the process.

But where we sit today we're looking at a great deal of uncertainty going forward. As you know, there's been a lot of discussion about moving the goal to 33 percent. And you're aware that Commissioner Grueneich's issued a report that she sponsored just last week. There will be a hearing at the PUC on that report. So that's something that we really need to take into account when we talk about fundamental changes to this program.

In addition, as you know, we'll be going out for another solicitation in 2006. There will be greater integration between our resource procurement process and our procurement process for renewables.

So with these things just unfolding, we need to be very cautious about making radical changes to the current program.

PRESIDING MEMBER GEESMAN: I agree with that. I was struck, though, by in Commissioner Grueneich's report, the, I believe it was about 60 percent of the resources that she envisioned, or the authors of the report envisioned, being available to meet that 33 percent goal were wind resources.

And I believe, and I may be wrong on my precise number, but I think an extraordinarily high number like 30 percent may have been solar resources.

In any event, the overwhelming majority of the resources identified in that report and projected as likely instate, commercially developable resources to meet that larger goal would be drawn from the ostensibly lower cost renewable technologies, at least in terms of the

early experience in the RPS program.

MR. GULIASI: That's right. What I want to focus on now is just a couple of things in the recommendations. I think to the extent that you can maintain flexibility to make mid-course adjustments would be, I think, wise practice, something to build into this report.

The report does talk about some flexibility, but to the extent that you can maintain flexibility going forward and not lock yourself into a program for fixed five-year period of time would be wise.

PRESIDING MEMBER GEESMAN: Do you think it requires legislative change to be able to accomplish that?

MR. GULIASI: I don't know. I just am not qualified to answer. But if you can maintain the flexibility here, I would urge you to do so. As you pointed out, you and the PUC are working together. So to the extent that you can make those changes administratively I think that would be the best situation, but I can't --

PRESIDING MEMBER GEESMAN: You might have your folks look at that --

MR. GULIASI: Okay.

PRESIDING MEMBER GEESMAN: -- question as to whether it would require legislative change to build in as much flexibility as you think is appropriate.

MR. GULIASI: Okay, yeah, we'll do that. What the staff recommends is really largely based on what we've observed to date, and in terms of who's needed or haven't needed supplemental energy payments. And while I can understand, you know, their conclusions based on what we've observed to date, what we've observed to date may not be the best predictor of what we might need in the future.

So, as we -- you know, as the state decides, if the state decides, to move to a higher percentage of renewables, we may find ourselves in a different situation. And we may find more parties needing supplemental energy payments.

And while I understand the recommendation to shift money toward emerging technologies, and that may be something that we need to do in the short term, especially to support the million solar roofs initiative, again I think you want to build in some flexibility and provide yourself with some offramps if we get down

the road a couple of years and find that the money isn't being spent wisely we can redirect the funds where the money may be needed.

So, just another cautionary remark to maintain that flexibility and make mid-course adjustments if you need to shift money back toward other technologies.

We've been on record here in the past in the IEPR process noting that cost effectiveness is a very important concept to bring to bear on these decisions.

We've talked about concentrating solar, thermal solar projects, which may provide more bang for the buck than what you get from a lot of smaller distributed units.

So, again, if --

PRESIDING MEMBER GEESMAN: Yeah, but Edison and San Diego's experience suggests that no SEP's required for at least one of those solar thermal technologies.

MR. GULIASI: And I recognize that and -- I'm making these remarks, you know, knowing what the situation is. But that's now. We don't know what will happen in two years. And we may find ourselves in a situation where those funds

may be needed for projects that may provide, you know, greater benefit to society.

The second thing I want to talk about is just the notion of a competitive auction. I may not understand --

PRESIDING MEMBER GEESMAN: Before you move to that, Les, let me ask you, though -- and I agree with your point on flexibility. But it would seem that we need to rely on some mix of empirical experience and projections from reports in determining any reallocations of funds.

And I wonder, how do you think we ought to weigh the empirical versus the projected?

MR. GULIASI: In percentage terms I can't say, but I think what the staff has recommended now seems appropriate. You know, I think they left enough money, you know, in the supplemental energy payment pot, if you will, and redirected some of the funds toward emerging technologies.

I think, you know, there's really no analysis behind it more than I think -- I guess, than what we've observed. And it's not an extremely radical departure. The amount seems appropriate, given the policy direction and the

likelihood that a million solar roofs program will become the reality.

So, I can't give you any percentage in terms of how to weigh these things, but I think just, you know, good judgment is the way to go. And as long as you maintain some flexibility to make mid-course adjustments in two years, say, I think you've done yourself -- you've served us all well.

PRESIDING MEMBER GEESMAN: Well, not to raise a sore subject, but the price of flexibility may be greater transparency in RPS bids and the cost of whatever million solar roofs initiative is launched.

MR. GULIASI: Okay, point well taken. The final point I wanted to make is just about the competitive auction notion. I may not understand it enough, and I just didn't really see enough analysis in the report to allow me to fully understand what the staff recommended.

The only thing I wanted to caution you about is, again, if you make these departures from the current process we may be unwinding a lot of routines that we have in place. Right now we have a process that I think people understand. It

seems to be integrated with the current solicitation process. We have standard contracts in place.

There's been a lot of work done to make the current process work. And while it may be imperfect, I think that if you change the program, you change the process, we'll have to go back and perhaps re-do a lot of the work that we've already put in place. And this may not be the time to start all over again, just as the program is actually gaining some momentum.

PRESIDING MEMBER GEESMAN: Yeah, I think the way the Committee IEPR draft frames that is that although we've been dissatisfied with the progress in the program, before making any significant changes it would be prudent to look over the results of the '05 solicitation pretty carefully.

And then any consideration of changes should be made jointly between the two Commissions.

MR. GULIASI: Yeah, I think that would be a good way to go. That concludes what I have to say. Thanks very much for the opportunity. And we'll submit comments.

PRESIDING MEMBER GEESMAN: Thank you. I've got some blue cards, so why don't we turn to those.

Pete Price.

MS. DOUGHMAN: Mr. Price has a presentation.

MR. PRICE: Thank you, Commissioners. Pete Price on behalf of Bergey Windpower. I would like to make a few comments on the draft 2006 Renewables Investment Plan. I apologize, Mike Bergey, the President of the company, couldn't be here today and asked me to speak on his behalf.

We'll limit our comments to the emerging renewables part of the plan, of course, which statutorily includes small wind below 50 kilowatts, as well as photovoltaics and a couple of other technologies.

First I want to say the plan certainly has some good points. Anytime you're going to almost double the amount of funding going into the emerging account that's obviously something we think is a good idea. It also increases funding for the consumer information and market support.

And the plan specifically notes that non-PV emerging technologies provide value in

diversifying California's electricity generation technologies and fuel sources, and proposes continued consumer information and market support for these technologies.

Unfortunately, the draft plan, from our perspective, seems to -- it's not quite clear, but seems to recommend that all of the funds for emerging renewables be used to support the million solar roofs initiative with no funds available for other emerging renewable technologies like small wind.

And if, in fact, this is the case, it's at odds with existing statutory requirements, since the emerging renewables chapter, except for the brief introductory comments, speaks only to PV. Yet obviously doesn't do something that we have urged before, which is also to examine whether market conditions have been in place to adjust the rebate levels for small wind as they have been adjusted.

Now, Commissioners, I want to be very clear regarding these next slides about Bergey Windpower's position. Bergey Windpower strongly supports photovoltaic, solar photovoltaic technologies. We support their expansion. We

support the million solar roofs initiative, and we share the Governor's enthusiasm for the opportunities that it presents for California.

But, solar is not a magic bullet. And while we haven't heard the Commission say it, the draft plan appears to take the approach of only pursuing solar. And the fact is that after six years and about $180 million in Energy Commission rebates, installed prices for solar, according to the Commission's own numbers, have not gone down appreciably. According to industry data, in fact, the retail price for solar modules is trending up.

And there's no doubt that solar is widely applicable in California, more widely than small wind, we certainly acknowledge that. But it's also undeniable that where a landowner has enough space and enough wind, the small wind system can cost about 40 to 50 percent less than PV. And that's not only for installed cost, but per kilowatt hour, as this slide indicates with just one example.

So, we think there's good reason to be excited about the solar initiative. But there's also a good reason to continue your policy of supporting a diverse set of promising emerging

technologies.

Now, the stated goal of the emerging renewables program is to accelerate cost reduction and market acceptance through high volume production of emerging renewable technologies. And the key, of course, is to achieve production volumes through a strategic use of the rebate levels to allow for cost reductions.

That's why, for example, in 2001 the Energy Commission strategically decided to increase the rebate cap for PV from $3 a watt to 4.50 a watt. Because at lower levels the market wasn't driving the cost reductions that you sought.

In 2003, by contrast, the Commission cut small wind rebates by the same dollar amount as PV -- and, as a matter of fact, on a proportional basis by a greater amount -- even though wind was not over-subscribed and hadn't enjoyed the explosion of sales that solar had.

The last item notes also that recently the Commission established the performance-based incentive program, which I gather hasn't had a lot of activity, but seemed to us could have been equally applicable to small wind, and yet it

applied only to solar.

In short, what the Commission has done has treated two polar opposite problems, over-subscription with solar and under-subscription of small wind, with the same medicine, rebate reductions. And as I said on a proportional basis small wind actually got a double dose of the medicine it didn't need in the first place, we believe. And sure enough, California sales of small wind have trended down, not up.

Those rebate reduction levels have had a significant effect on customer acceptance of small wind.

We believe that California's an extremely important market for the U.S. small wind industry. It's the largest domestic market, accounting for about 35 percent of on-grid sales. Has great potential, about a quarter of California's land area has sufficient wind resources for small wind, with a potential of roughly 400 megawatts.

Small wind shaves peak because wind resources in the best market areas coincide with peak residential demand periods. And in particular, with the large amounts of money

proposed for the emerging program in this plan, we believe California can nurture a diverse distributed renewables market for continuing investment in small wind.

We strongly believe that where it's applicable small wind is very cost effective and Californians will choose small wind. But we need to begin to use the emerging renewables program as it was intended to send the right signals to consumers.

We understand the Commission's going to undertake a revision of the renewables guidebook in early -- or in January, and we definitely want to work with the Commission and other small wind turbine manufacturers to send those right signals.

PRESIDING MEMBER GEESMAN: I think we've got a workshop scheduled for that --

MR. PRICE: Yes.

PRESIDING MEMBER GEESMAN: -- at some point in December.

MR. PRICE: Right. That concludes my comments.

PRESIDING MEMBER GEESMAN: Thanks, Pete.

MR. PRICE: Thank you.

PRESIDING MEMBER GEESMAN: Gary

Schoonyan.

MR. SCHOONYAN: Thank you, Commissioner Geesman. Gary Schoonyan representing the Southern California Edison Company.

In essence a lot of what I was going to present I think I'm going to not present based upon your, at least what I understand to be what you're suggesting transpire with regards to market reference price. And I would assume that also includes the reverse auction, that particular type of an approach. So I will withdraw my comments there.

The only thing I would like to supplement and say is something along the lines of coming up with some criteria associated with the photovoltaic program, particularly the emerging program.

One of the concerns that we had originally with SB-1, and as it was moving through the Legislature, the author was kind enough to include language to address this, is the need for performance incentives and the need for installation standards.

We all understand, I think the last gentleman's particular presentation pointed it

out, that a lot of money has been spent with regards to trying to pursue the photovoltaic approach.

We're not saying that that shouldn't be addressed down the road and what-have-you, but we need to move forward and spending those amounts of money on photovoltaic only under the premise where there are performance incentives, as opposed to just paying upfront dollars based upon installed capacity, and also have installation standards.

With that, I'll conclude my comments.

PRESIDING MEMBER GEESMAN: Gary, I'm embarrassed to say you're preaching to the choir on those questions. And I think you'll find a discussion of solar in the Committee draft IEPR to be to your satisfaction.

We've tried to lay out, as we did in the 2004 Energy Report update, what we envision as the principles of a rational solar program. And shifting to a performance-based incentive is a big part of that.

We've already begun some efforts to develop better training and better standards for the installation workforce.

MR. SCHOONYAN: Thank you.

PRESIDING MEMBER GEESMAN: Jane Turnbull, League of Women Voters.

MS. TURNBULL: Good morning, Commissioners, Staff; I'm Jane Turnbull; I'm here on behalf of the League of Women Voters of California.

We are interested in the renewables portfolio standard. We certainly support the 20 percent by 2010. On the other hand, we also acknowledge the fact that renewables are only one facet of the total energy portfolio of the state, and really need to be looked at in the context of the whole, not in and of itself.

And I think the same thing needs to be said of renewables by themselves. They also have to be looked at in terms of a balanced mix and a balanced portfolio.

With that in mind we are concerned about the emphasis on the emerging renewables funding and the exclusive set-aside for the million roofs legislation.

We do think that there were problems with the original legislation in the sense that energy efficiency was not really incorporated as a criteria in the installation. And energy

efficiency is part of the balance mix that needs to be looked at.

We do think that performance-based incentives are also a requirement that need to be considered when photovoltaics are going to be supported by state funds.

So I think the program that has been laid out makes fairly good sense, but I think it needs to be looked at in terms of a broader whole.

One of our other concerns is that distributed generation is certainly an important part of the loading order that the state has come up with. Distributed generation includes cogeneration and combined heat and power. The emphasis on distributed generation exclusively as solar is something that we think is something of a mistake.

Thank you.

PRESIDING MEMBER GEESMAN: Thank you, Jane. Andrew Kruse.

MS. DOUGHMAN: Mr. Kruse has a presentation.

MR. KRUSE: Thank you very much for this -- letting me speak to you today. My name is Andy Kruse. I'm co-founder and Vice President of

Southwest Windpower. We are also a small wind turbine manufacturer.

My presentation is just a little bit of background about who we are because this is the first time I've spoke here. And also to kind of give our position of what we think is going on.

First of all, also I want to say that the Committee has done a tremendous job of bringing these notes together. I've been very involved in the Arizona programs, as well. And gone through the similar programs. And I'm very pleased to see how California's really continuing to take the lead in renewables.

Briefly, our company was founded in 1987. We have about 62 employees in Flagstaff. And we're considered the largest manufacturer of 400 3,000 watt wind generators. And in the last 12 years of our business we've produced about 85,000 small wind generators.

We continue to produce about 1000 wind generators a month out of Flagstaff, and they're shipped all over the world. I think I got a couple slides on that.

Our single largest market, however, is the State of California. Our business primarily

historically has been focused on off-grid applications where these incentive programs and things were really not applicable.

But as we grow our business we are moving more and more into the grid-connected market. We see a tremendous opportunity there, and I want to talk a little also about that, what's going on in that marketplace.

You'll find our products primarily combined with photovoltaics. Some of our largest customers, our distributors are like BP Solar. So you'll find them in hybrid from Navajo -- the Navajo Reservation to the Maldives Islands. You'll find our products, like I said, in every corner of the world, primarily for battery-charging applications.

And specifically in California you'll find them more and more, again, in the offgrid application. Also on mountain top repeater sites. The lower corner there is a mountain top hybrid system using both PV and wind together to run cellular systems.

But the success of our business here has really done very very well, and we're very pleased to be here.

Small wind comes in all sizes. And I think that's one thing that's really important for everyone to understand, is that ranging from the littlest 400 watt up to 50 kilowatt, which is really pretty much in the California's definition, and all of them have different types of towers and designs and applications.

And I think it would be great if there was a way that California could look at all technologies and say, you know, there's an opportunity there for small wind.

There's a lot of changes that are going on in the industry, as well. I've been doing this for over -- well, close to 20 years now. And in the last just few years I have seen a change in small wind technology like I've never seen before.

Today -- and just a few years ago there was just a handful of small wind turbine manufacturers. Today there's more than 70 producers of machines under 50 kilowatts. And we're seeing this trend every day, that there's a new design, new product out there.

The emphasis is really on what the people have been looking for. And that's what our emphasis has been, as well. We've listened to our

customers and we've found the results are new designs that really meet their needs.

These are machines that are much quieter, more reliable. They don't necessarily require taller towers. And certainly much less expensive. You'll see next year we'll be introducing new products that will easily produce power for about 10 cents a kilowatt hour installed before any rebates.

And these kind of changes in the industry I think are tremendous. And what we're looking for, of course, is that support from the state to help us with the development of that market.

In California we all know there is a great deal of available resources here. It's really the founding state when it comes to wind energy; perhaps even renewables, in general. And we'd like to see that continue with the incentive programs.

So, what we're asking for is basically letting the customer decide. There is a lot of opportunity for small wind. There's a lot of places where it won't work. But there's those people that live in those rural areas, as Pete's

presentation had clearly demonstrated, that small wind can work very very well.

And I think it's a cost effective solution. And I believe the market is great for the State of California. And I thank you.

PRESIDING MEMBER GEESMAN: Thank you very much. Can I ask what your permitting experience has been in California localities?

MR. KRUSE: Fortunately, in our offgrid market it's really pretty nonexistent. People just basically put them up.

PRESIDING MEMBER GEESMAN: Yeah.

MR. KRUSE: In the ongrid, we do have a number of machines now that are connected to the grid. And the process has been relatively simple, primarily because our towers are usually between 60 feet and lower. We're in the 40 to 60 feet.

Some of our new products, for example, they're designed to fit specifically on 35-foot towers.

PRESIDING MEMBER GEESMAN: Okay.

MR. KRUSE: So, we're trying to, you know, find that niche with the market by looking at, you know, what are the requirements.

PRESIDING MEMBER GEESMAN: Well, thanks

very much for your comments. Commissioner Pfannenstiel.

ASSOCIATE MEMBER PFANNENSTIEL: Just a question. Your comment about small wind is cost effective and adds value to photovoltaics. I assume you've done some economic analysis that talks about size of wind and how you combine it with PV.

MR. KRUSE: Yes.

ASSOCIATE MEMBER PFANNENSTIEL: It would be interesting to me to look at sort of the sizes you're talking about between the two. So, if you have something like that that would be available, I'd like to see that.

MR. KRUSE: I don't have it with me, but I would love to send you something.

ASSOCIATE MEMBER PFANNENSTIEL: Thank you.

MR. KRUSE: Yes. Just quickly, I have just a few brochures I'll just leave with you. They have some technical information in them for you.

PRESIDING MEMBER GEESMAN: Great. Thank you very much. Mark Johnson, Golden Sierra Power.

MR. JOHNSON: Good morning. I'm Mark

Johnson with Golden Sierra Power.

I just wanted to make a few comments regarding the investment plan, mainly regarding the Solar Initiatives program.

A couple things that I wanted to comment about, mainly about the flexibility. I represent now a large German panel manufacturer that will be distributing. And we're looking at developing manufacturing facilities here in the western part of the United States using new technology and processing some of the things we've discussed in the past.

My concern with flexibility is that it sends a message to manufacturers who are coming in and developing new programs that California is not committed to spending dollars over a long period of time. And with that message it makes it difficult for us to come in and spend up to $100 million to create a silicon ingot processing plant and panel manufacturing plant within this region in California, whether it be in California or even here in the western United States, to support the infrastructure needed to meet these goals.

My concern, when I listen to the presentations, is that we're really missing out on

trying to build the infrastructure needed to support this million solar initiative program.

We're seeing that in the cost of what we're paying for panels today. Yes, we are seeing a cost increase. But what we're seeing is California catching up to the European and Japanese market, to what they were willing to pay. And those costs were really established based on the incentives that were being provided in those countries.

And so I would really recommend that although I do support some flexibility, but that the Commission and the PUC send a message out that they are committed to the PV industry over a long period of time so that we could come in and establish those large amounts of capital to meet that infrastructure.

One of the other comments I'd like to make regarding the performance-based incentives. As you know, I've been fairly involved in trying to develop a program. One of the things I think that's really lacking is the consumer's ability to obtain funds based on a performance-based incentive, to -- either through security of those funds.

And so I would recommend that the PUC and the CEC work together in trying to figure out a way to change the legislation, or change the rules that would allow the utilities to provide some sort of financial lending mechanism to these individuals for PVI type programs coming up.

I think the legislation now bans -- or prohibits us from doing that, where some states have legislation within the utility guidelines that allows utilities to lend that. And I think that would life some of the issues that we're dealing with PVI.

I know one of the problems that I see directly dealing with the PVI is the fact that the dollars and the data we're using is based on solar radiation availability that is not readily available within the state.

Our studies have shown, just for example, you need 1860 watts per square meter -- or watts per kilowatt. We're only getting in the average in the state somewhere in the 1600 range.

And so to make these things viable and match out with the rebate that we're presenting, we've got to figure out a way to build these systems and present to the consumer as we go

forward a foundation or a basis that they know they're going to get what they're going to pay for.

Today if they go in and put a PVI in and they think they're going to get 280, they're not even going to get close. And it's simply because the solar radiation is not available based on that amount of money within the area.

And then to close, I would actually -- I've been involved in 0403 -- 17 for the last couple years since it began, and with the changes with SB-1 going dying, and with the changes in how things could possibly come out, I would encourage the CEC to be very proactive with the PUC in that procedure in establishing that program. Because they have a lot more experience that I'm finding in dealing with these issues than the PUC does in dealing with that.

And if we wish to have a good program I think that your participation is going to be extremely needed in that position.

PRESIDING MEMBER GEESMAN: Thanks for your comments, Mark. I don't think SB-1 is dead, though. It has not yet received final action --

MR. JOHNSON: Right, right, but anyway,

somewhere we're going to get some program, but I would still encourage you to be very proactive, more today than in the past, with the PUC. And especially with 0403 -- 17 with what's -- if it does come down to that being the procedure that gets the million solar program in place.

PRESIDING MEMBER GEESMAN: Point noted.

MR. JOHNSON: Thank you.

PRESIDING MEMBER GEESMAN: Thank you. Steven Kelly, Independent Energy Producers.

MR. KELLY: Thank you, Commissioners; Steven Kelly with the Independent Energy Producers Association.

I actually want to echo some of the thoughts that Les Guliasi put out on the table today. And when I take a look at the substance of what the staff has put together in this report, it really strikes me that it's kind of based on past history. And I think the past history, in terms of the RPS implementation, is relatively unique.

I think the procurements that have taken place have been ones that have been grabbing the low-hanging fruit. You find a lot of wind, some small natural gas, not at lot of big geothermal and so forth.

And I would echo a cautionary note to do a major shift of funding in the absence of having a few more experiences in a broad-based RPS auction. And I think some of those are going to be taking place in 2006 where we might get a better indication of the extent to which you need to retain money in the supplemental energy payments account to make those worthwhile.

I think it's just too soon right now to use the historical trends to project forward to what's going to happen there.

The approach that the Commission has traditionally take on this has been to allocate certain funds, and then if they're unused, roll them into accounts where they can be more useful. And I actually think where we are today that's a better principle to apply to the planning process. That it gives you the flexibility that Les was talking about, and I think the industry would like to see, to allocate the funds where you would want, but it also sends the signals now that you are prepared to allocate moneys broadly across a variety of programs, and then reallocate them if not needed.

PRESIDING MEMBER GEESMAN: There are

some statutory restrictions on that, though.

MR. KELLY: I think for the new, yeah; your staff mentioned that. I mean right now I suspect that's going to feed into one of my other recommendations. The issue of sounds like you're going to need legislation to overcome some of the transferring of money. So I think we need to take that on as a separate issue.

It kind of feeds a thought that I had when I had reviewed the staff -- and I have not had time to fully review this document. But it might be helpful from a work product perspective to present a renewable plan based on the existing statutory requirements as kind of chapter one.

And then to the extent that you want to talk about recommendations on how to do a plan based on modifications in the Legislature, that could be chapter two.

Things are getting kind of melded here and this plan seems to presume a lot of changes that may or may not occur, particularly if they require legislative changes.

So it might be, from a planning document perspective, helpful to break that out and do a plan based on what you know today and what you

have to do. And then do a plan on what you would like to do so that we can see the difference.

One of the things that strikes me in this is I would like to see an analysis of kind of the cost per megawatt on a capacity basis, or cost per megawatt hour that is associated with the transfer and funding. Because there's a tremendous amount of money being transferred, as I understand it, from the supplemental energy payments that are in the RPS, the new stuff, to the emerging.

I have some concerns that we're going to reach the RPS goals that we've laid out under the track that we've taken. Your report points out that from a net systems power perspective we seem to be going backwards.

And I'd just remind the Committee, politically and otherwise, when the aura of the million solar roofs initiative dies, which it will either because gas prices drop to $2 at the pump, or because we enter into a war in the northeast or Turkey or wherever, something is going to take that off the front pages.

But what people do expect, policymakers and public, is that we meet the RPS requirements

because they know that that results in clean air and cleaner air.

And ultimately in the next five years people are going to be looking at how do we do in terms of improving the net system power. And that's where one of the focuses should be, is making sure that the dollars go to insuring that our net system power, as a total, is improving.

And the analysis that I think is missing here, that I haven't seen yet, is one that shows how we're going to get there, but through these reallocations proposed by staff.

So I just throw that out as something to keep in mind in terms of developing this work product. So, thank you.

PRESIDING MEMBER GEESMAN: Thank you, Steven. Matt Freedman from TURN.

MR. FREEDMAN: Thank you very much, Commissioners. Matt Freedman here representing TURN. I only have a few comments today because I understand, although I missed the beginning of the session today, Commissioner Geesman, that you mentioned taking a step back on some other recommendations in the draft report regarding the market price referent and the reverse auctions.

But let me start out by talking about the allocation issues. The report proposes a reduction in allocation to the renewables portfolio standard account suggesting that there should be $266 million over the 2007 to 2012 period.

I'd like to echo some of the comments that Steve Kelly just made. I am concerned about whether or not there's going to be sufficient funds available. The problem is that we really don't know what the draw on that fund is going to be. And the report suggests that high gas prices mean that we face little risk of seeing any significant pull on the fund.

I'd just like to point out, of course, gas prices do fluctuate. We see forwards of $10 to $12, but we've seen spot prices the last week of $6 to $7. Where are they going? I don't think anybody really knows. But if gas prices fall significantly from the forwards that we're seeing today, then it's easy to imagine a market price referent under the existing RPS program where there's going to be a few projects that are going to need money. And it won't take very many projects to create a significant draw on the

program.

For example, a single 20-year contract with a 200 megawatt geothermal facility priced at 1 cent per kilowatt hour over the market price referent would require $315 million nominally over the term of the 20-year agreement. I just point that out for reference purposes so we understand that a small number of projects could come in for a very large amount of money.

PRESIDING MEMBER GEESMAN: It's a ten-year program, though, isn't it, Mr. Freedman?

MR. FREEDMAN: The Energy Commission is limited, under statute, from awarding funds over a period of greater than ten years, but if there is a 20-year contract many parties have suggested to this Commission that the full 20-year above-market-cost be paid, but over a ten-year timeframe.

And the Public Utilities Commission has agreed with that position. Has urged this Commission to take that approach when supplemental energy payments are awarded for contracts of longer than ten years.

We do support providing flexibility because of the uncertainty, not only with respect

to the RPS program, but also with respect to the emerging renewables program and how solar energy support is going to be collected and allocated.

TURN is a supporter of the solar energy programs that this Commission has administered. We think the Commission's done an excellent job. And we look forward to helping shape the next iteration of this policy, the California Solar Initiative, or million solar roofs, or whatever name it's going to have when it comes to fruition.

And we think it's critically important to insure the continued availability of rebates and to make sure that there is no cessation in the availability of these funds at any point.

And so providing more money, I think the Commission has been pretty innovative in how it's insured money's been available up until now. Clearly more money is going to be needed. But we also don't know the method of collection for the next number of years. And flexibility will be key to insuring whether or not the recommendations in this report and the allocations should remain over time.

We're also concerned about with respect to the allocation on the renewable portfolio

standard program about possible price escalation in renewable energy markets that the Commission needs to be aware of. There are widely reported shortages in wind turbines. Wind turbine prices continue to skyrocket at the manufacturer level.

There have been increases, of course, in steel prices and labor prices. We've been hearing a lot of reports regarding price escalation related to the rebuilding efforts in the wake of the hurricanes in the Gulf States.

All of these are potentially driving renewable energy prices higher. Again, it argues for the need to be cautious about assuming the lack of draw on the RPS program account as we go forward, especially given we have three solicitations that are ongoing right now from the major IOUs. Results haven't yet been reported from that.

And as I indicated at the beginning, I understand that the Commission may be taking a step back on making formal recommendations with respect to revisions to the RPS program, the market price referent, reverse options. We have serious concerns about those two proposals. I have articulated some of our concerns during the

IEPR hearings. I will not do again today. If that, in fact, is where the Commission is headed I'd be happy to submit something in writing to explain our views more fully.

And would only note that to the extent that there were such major revisions it would require legislation. And hope that this Commission would want to work with others and the PUC on any such effort.

So, those are my commends. Thank you very much for your time.

PRESIDING MEMBER GEESMAN: Thank you. Lori Glover.

MS. GLOVER: Good morning, Commissioners. My name is Lori Glover; I'm with S.O.L.I.D. USA. I'm here actually with a little bit different request. So, first of all, let me explain the technology and then you can understand where I'm coming from.

What we are asking today is that we be included in any incentive program that goes forward in California. The technology that my company has is commercial-scale, solar-cooling air conditioning and heating and hot water.

Not quite the same as solar hot --

residential or domestic hot water systems that you see normally here in the U.S. There are a handful of these systems currently in the U.S. for big hot water load users. And a few of them now have air conditioning systems in place. The Audubon Society, or Audubon Center, excuse me, in L.A. I believe has recently installed; a couple others here in California.

We opened our company in 2005 in Arizona. We're installing our first project air conditioning and heating with the next couple of months over there. Are now looking to move our business into California as we see this to be pretty critical to what we're doing.

The technology comes from Austria, a company that's been in business since 1992. And they've done hundreds of large-scale, thousands of square feet of solar collectors. Primarily for big district heating systems, which we don't do much of here in the U.S.

We see this company, S.O.L.I.D. GMBA, just now expanding into China and the U.S. Here in the U.S. we see the west and the southwest as being the primary market of the company for air conditioning, because we have a lot of -- it's hot

here and we have lots of sun here.

Let me start by saying that one of the questions I always get asked by regulators is why can't you be treated like solar hot water. The problem with going in as a solar hot water producer is commercial scale cooling and heating are a little bit more expensive than the typical hot water system. You have to construct them to produce higher degree water so that you can run things such as chillers. And that and the chiller and the entire system that is involved, you don't just put an air conditioner up like you do in a home; you have chillers and pumps and boilers and all sorts of things, so it's a pretty complex system. So, it's more expensive than just a standard panel that you put up for hot water.

The second question I get asked is, you know, why is this an issue for the electric world. Well, the reason it's an issue for the electric world is the systems actually displace electricity directly. So that's a little bit different than just a hot water system that displaces electricity only where there's electric service only. We displace electricity whenever we put a system in that includes cooling.

And that displacement is a firm displacement. We don't have issues, we have internal storage, it's pretty reliable system.

So these are systems that have been operating for years that we're trying to bring into the U.S. but we need a little bit of help from the regulators. And, frankly, I said this is like throwing a dart at the map, because where do you start in California. Any day in any city there's something going on, you know, related to energy.

So, we're here. We've filed some comments in the 2005 proceeding. We will file comments in this proceeding. We're trying to look to you guys to get some help as how, you know, what's the best way to move into California.

This is a technology that we believe is going to be quite cost effective. It also works well with CHP, making it even more cost effective. So we think there's a spot for it here in California.

What we've done so far is we started in Arizona; that's where we're based. The Commission there instituted a pilot program to look at solar cooling and heating. That's now, we hope, going

to be rolled into a standard green credit purchase program for the major utilities. We believe this week Arizona Public Service will be filing a new program that includes this technology.

The incentive for our technology is actually going to be performance-based, it's going to be a feed-in tariff. That works quite well with this technology because since it's commercial scale, generally we put the systems in and we own them and operate them for customers. We're more like an energy provider. We don't want them to mess it up, so we just want to sell them energy. And we do that under a long-term contract. And we meter the energy delivery. Therefore, a feed-in tariff, you know, is a pretty good fit for us.

We think that this market could be huge. It's already pretty big in Europe, and they're looking at, without really any focus. Now they're looking at focusing on it. They're thinking they can meet 25 percent of their entire portfolio standard with heating and cooling systems. Renewable, not just solar. But they have more biomass there and we have more sun here, so.

Also, in the last few years that this has been a focus in Europe the costs have come

down quite a bit. They will be high here to start with since we will be importing until we set up manufacturing, or until companies get going here in the U.S. But even at the relatively cost effective prices we are now, we really think these systems could drop 50 percent in cost in the next ten years.

So, any questions?

PRESIDING MEMBER GEESMAN: Thank you very much. Commissioner Pfannenstiel.

ASSOCIATE MEMBER PFANNENSTIEL: You mentioned your experience in Europe. Where in Europe, Germany?

MS. GLOVER: We're actually based in Graz, Austria. And I had the joy of visiting there Arnold Schwarzenegger Stadium. We're based in the city that he grew up in. And the largest system today is actually on Arnold Schwarzenegger Stadium there.

So the company is based in Austria. They have no sun there. We go there and we say, okay, it's raining, it's cloudy and these systems are working. This is pretty neat. It's cold. We can do this, you know, definitely in the U.S. southwest.

So the company is based in Austria and it's been there since 1992.

ASSOCIATE MEMBER PFANNENSTIEL: And that's been your largest market in Europe, has been in Austria?

MS. GLOVER: Well, it's kind of interesting. I think if you look at the numbers, Germany my have larger total number, but per capita Austria is actually the largest user of solar/thermal in the EU.

But we've also -- we've done projects, I think, in 12 countries, how many countries -- quite a few in Greece.

ASSOCIATE MEMBER PFANNENSTIEL: Thank you.

PRESIDING MEMBER GEESMAN: Thank you very much.

MS. GLOVER: Thank you.

PRESIDING MEMBER GEESMAN: Okay, I've got a list of people on the phone that want to speak. First one up is Steve Munson from Vulcan Power.

MR. MUNSON: Thank you, Commissioner. Can you hear me appropriately? Is it too loud or too soft?

PRESIDING MEMBER GEESMAN: No, it's just fine, Steve.

MR. MUNSON: Thank you, sir. We have a number of comments which we will be putting in writing, so I'll just hit the major points.

We are concerned that a decision needs to be made on exactly how the SEP program for existing will deal with contracts that are greater than ten years. We agree with the TURN position and the PUC position, as we understand it, that a 20-year contract would be paid over a ten-year period.

Item two. We would appreciate a decision in the near term about how projects that are phased in, beginning with 30 or 60 megawatts baseload, would be dealt with in terms of deciding what the appropriate payment schedules are, and which bucket the future payments would be made out of.

For example, projects may initially come online in '07 or '08 with additional follow-on projects in '09 or '10. And we'd like some clarity on that point.

Item three. We disagree with the CPUC report that was alluded to earlier that something

like 60 percent of demand will be met by wind, and 30 percent, or some number like that, by solar.

Historically, roughly two-thirds of the total power has been produced by baseload geothermal and biomass. We see nothing to indicate, except for a possible shortfall in SEP funds, that the historic trend will be changed. We believe that geothermal and biomass will meet half to two-thirds of the total load in terms of the total output.

We believe that any SEP award should be guaranteed and not subject to any later reduction or unavailability of funds. A risk that the funds won't be available could affect the financing of a facility.

It's our counsel's position at Milbank, Tweed, that the SEP award process could stand some clarification; determine whether payments will be made to utility in trust for payment to the plant owner.

We are interested to know whether we could get some clarification on whether or not a plant owner would receive payments for lost output if a generator could have delivered but doesn't due to force majeure. It's a minor issue, but

does have need for clarification.

There's this over-arching issue that affects all stakeholders about confidentiality of contracts. Having listened to many workshop comments in the past, you know, it's kind of like the developers have concerns that competitors would get their contract data. Utilities seem to have concerns that transparency would result in a sellers' control of the market. And then obviously yourself, Commissioner, and others are concerned about how to set proper policy if you don't have the hard data, you know, regarding the contracts.

I don't know, you know, what the solution is, but it needs some resolution and soon. We certainly agree with you.

We don't believe that any of the potentially available funds for other uses should go to other uses, in fact, other than existing renewables. We don't believe that there's any proof that there's a substantial near-term reduction coming from taking funds away, or keeping funds from existing renewables, putting them into any of the emerging technologies.

Clearly the bigger bang for the buck

comes from putting every dollar within the program into existing that's available, in addition to the efficiency program, of course. And we certainly don't favor any kind of allocation of additional funds to emerging.

We certainly agree with the earlier utility, with Les' comments, that this may not be the right time to makes changes just as the progress is getting underway. We certainly would appreciate no change in the MPR process and no move to a competition auction.

You know, if that were to take place, it just doesn't seem that it would be fair to make such a change on any bids that have been made in the past into any of the RPS or other project contract queues. Parties have made their decisions about how to bid and expended substantial money to do that. And could encounter, you know, major problems if there's a change in the program just as it's starting to get on track.

That concludes our overview comments. We appreciate the chance to comment. Do you have any questions?

PRESIDING MEMBER GEESMAN: No, I don't

think so. Thank you, Steve.

MR. MUNSON: Thank you for the ability to comment.

PRESIDING MEMBER GEESMAN: Next person up is Tan Hunt. Okay, maybe he'll come back. John Galloway, Union of Concerned Scientists.

MR. GALLOWAY: Good morning. Appreciate the opportunity to participate by phone. I think that the staff has done a really good job in looking at how the funds are going to be spent for the renewable energy program over the next five years. I want to focus my comments today on the RPS subaccount in the program.

It seems to me that, you know, in structuring a fairly substantial shift in the RPS program we need some assurance that we're going to get the same or greater amount of megawatts developed in the state, you know, for the same amount of public funds that we're spending. And not sacrifice this goal to achieve, you know, a supposed simplicity in program.

You know, acknowledging that there are a substantial number of challenges to be overcome in the program and in the process. You know, we've had a lot of discussions during the IEPR workshops

about how to start addressing these challenges. But as we do that I don't want to see us sacrifice the overall goals of the program.

And I do appreciate staff highlighting in the investment plan draft what the program has accomplished so far, that we've seen the utilities signing contracts for up to and over 1700 megawatts of new renewables. That says to me that somewhere in this process we are doing something right.

And it doesn't strike me that the proposed auction format would reduce the complexity overall in the program. And I can offer some more written comments next week on the auction format. And maybe I would want to understand the earlier recommendation by Commissioner Geesman to either remove the discussion about the MPR or the removal of the MPR. No one understands really what I should be responding to in written comments.

PRESIDING MEMBER GEESMAN: Okay, let me jump in there then, John.

MR. GALLOWAY: Okay.

PRESIDING MEMBER GEESMAN: And I don't want to foreclose you from including it in your

comments. But I think it might be better poised to activities that we'll undertake in 2006.

The Committee draft of the Energy Report recommends that we and the CPUC jointly review progress in the program, including the discussion of either the reverse auction or changes to the MPR process, in that we look very closely at the 2005 solicitation before proceeding with that review.

MR. GALLOWAY: Thank you for the clarification. I think that makes very good sense. So I will offer some comments and thoughts on that.

But I think the thing that kind of remains in the report is the idea that, you know, the MPR can remain as a reasonableness check that doesn't necessarily trigger the same interactions with the supplemental energy payments. And I think we -- there are some questions that need to be addressed around that process, either in this report, or as staff thinks about this through the 2006 review process that you just mentioned, you know, such as how is that number chosen.

You know, if a lot of time is being spent in workshops and comments and formal and

informal discussions about how to construct the MPR, if we're still going to use a reasonableness benchmark I think there are a lot of unanswered questions about how we're going to simply that process, while at the same time not sacrificing the need for some kind of benchmark that is applied against the contracts the utilities are signing.

I think the auction concept is certainly interesting, but I think that at least for -- you know, if this is tried in 2007 there needs to be some kind of an offramp, you know, such as reverting back to the current scheme rather than just, you know, ending up in an experiment that doesn't necessarily produce the results that we want.

And kind of taking a step further, Mr. Guliasi's point about the flexibility of reallocating funds between programs, and the need to make those adjustments in the future. I think that's also important.

And --

PRESIDING MEMBER GEESMAN: Well, let me say there, John, that I would encourage you and any of the other parties that have a particular

attachment to the current MPR SEP structure, to try to address the role that you believe price competition should play in the program; and the extent to which you think that its current opaque status is able to achieve whatever role you attribute to price competition.

MR. GALLOWAY: Sure. I think that's a fair point. I've, you know, certainly already made that before, and I think that's true on both sides of the equation, regardless of the design of the program.

And I don't get the sense from reading the draft report that that question is necessarily answered. I think there's kind of a de facto assumption that changing to another structure will increase transparency. Maybe some more discussion on that would be warranted. Or maybe that's something that will emerge from the 2006 review process. So I think that's a point that I will heed in making further comments.

And a couple final points. In looking at how the supplemental energy payments are structured, I think a lot of the staff's recommendation is predicated on the fact that the funds haven't been used. I think it was Mr. Kelly

who pointed out that you are probably going to see some of the lower cost projects being picked first in the early years. And that the need for the funds ill begin to emerge in later years of the program.

And so I'm just urging you, you know, not necessarily to abandon the idea of reducing the amount that's allocated to the RPS fund program, but going back to the earlier point about allowing some flexibility to adjust as needed. You know, not to say that we should immediately go back to allocate all of the funds to the RPS. But I think I'm seeing a somewhat concerning trend towards putting more and more eggs in the emerging renewables basket.

And so, you know, is 38 percent the right number for RPS? I don't know. I think allowing for some review and adjustment in the future is appropriate.

My final comment's related to auction; I'll save those for written. And understanding that we'll be looking at the details further. And I appreciate the opportunity to provide comments today.

PRESIDING MEMBER GEESMAN: Thank you,

John. Kip Kunts, Seawest Windpower --

MR. KUNTS: I have no further comment at this time. I just wanted to address what one gentleman mentioned before about the rising cost of windpower on the manufacturers' side. I'm from Seawest Windpower.

And that's one thing I think the Commission should take into account is the funding. The fact is prices of wind turbines have gone up dramatically.

And that's all I have.

PRESIDING MEMBER GEESMAN: Thank you, sir. Joe Kloberdanz, SDG&E.

MR. KLOBERDANZ: Good morning, Commissioners. As you may know or may not know, I prefer to be there in person when I'm going to address you. And I very much appreciate your making this opportunity available in this way today. I simply couldn't get there today.

Matt Freedman and Les Guliasi, John Galloway and indeed, Commissioner Geesman, have all kind of touched on the two themes that I wanted to speak to, and that has to do with recommendations regarding the MPR and the auction process.

I do think we need to see a little more about how these things are working, especially the SEPs, since we haven't really given any away to speak of. And before we make decisions about changing them.

I do sense, as my colleague from IEP suggested, that we may be seeing different pricing coming in in bidding in the near future. It's unknown. We're all learning here.

It's certainly premature to declare the current methods with respect to MPR and the SEPs allocation of funds, certainly premature to declare either one of those in need of repair in our view.

So I thank you very much for the opportunity. We'll go into a little more detail in written comments, just so you have them for the record. Thank you.

PRESIDING MEMBER GEESMAN: Thank you, Mr. Kloberdanz. Jack Pigitt, Calpine.

MR. PIGITT: Yes, good morning, Commissioner. We think that it would be a mistake to reduce the allocation of funds to the RPS at this point. Right now you really only have the 2004 RPS solicitation and a few contracts that

were signed outside the solicitation to go by.

In our opinion the 2004 solicitation was not indicative; many renewable developers had just begun to gear up and meet the RPS.

And in this draft report I'm looking at table ES-1. The reduction in the new, or I guess in the renewable portfolio standard funding level amounts to 26 percent if I'm reading this correctly. And I think it's going to be viewed in the investment community as a reduced commitment by the State of California to the RPS program.

And I believe it's a mistake at this point. You know, you have some aggressive goals to try to reach 20 percent by 2010. And, you know, I think it's fine to do some reallocation, but this is a huge amount. And I would at least wait until there's sufficient projects under construction so that you're reasonably satisfied that you're going to meet the goal.

My other recommendation is not change the procedure with the market price referent and so on at this point because everybody's just now gotten to the point where they understand it. And I would at least go through a couple more solicitations under the existing structure before

looking at any changes.

Those are my comments.

PRESIDING MEMBER GEESMAN: Thank you, Jack. Is there anyone else here in the audience who cares to address us? Yes, sir.

DR. HAMMON: Good morning; my name's Rob Hammon from ConSol. Good morning, Commissioners Geesman and Pfannenstiel. Thanks for the time to address you this morning.

I just want to mention that we support the staff report and appreciate all the hard work that's gone into it.

We support the notion that you're supporting emerging technologies is, I think, the correct approach. It's an opportunity to bring those into cost effectiveness.

We're making some inroads in the residential new construction market working with builders and solar suppliers and energy efficiency to produce combined packages that are producing cost effective to the consumer, including the buy-down; cost effective energy efficiency improvements; cost effective solar, the package is cost effective from a cash flow perspective to the consumer. Again, including the buydown. And I

think we want to support that sort of effort.

There were some comments earlier today that the cost of solar going up, as opposed to going down, or at least not going down as much as they were anticipated to. I think many of us know that that's due to the cost of crystalline going up. And we don't want to have a hiatus in support of this market that could damage it in the long run. In the long run it is the right solution.

The product is -- there's increasing effort, evidence, as well, that solar homes produce at peak, which is where we really need it. And I think we'll find that with the increasing support and some new ways of looking at it, that it's really a superb approach to increasing efficiency and producing generation, as well.

We do support the notion of basing the incentives on performance. It's not appropriate to put solar on homes that are not efficient. It's absolutely the appropriate thing to do to package energy efficiency and solar and we're working with other staff to produce that result.

Thank you very much.

PRESIDING MEMBER GEESMAN: Commissioner Pfannenstiel.

ASSOCIATE MEMBER PFANNENSTIEL: Rob, have you found that the builders who are interested in putting solar on their homes are able to work out any special deals with the solar manufacturers?

DR. HAMMON: Thanks for raising that point. In the past, the vast majority of the solar that's been done on new homes in the past few years has been from a single manufacturer.

There are now five manufacturers who are in this market, and competition is just beginning.

I'm not aware of any special deals that have been produced, but I think that competition is going to be growing in the very near future. And again, it's a reason to support this market.

ASSOCIATE MEMBER PFANNENSTIEL: And as someone who's worked on both the new construction market and somewhat the retrofit, are the costs on the new construction market significantly different than in the retrofit market?

DR. HAMMON: For solar?

ASSOCIATE MEMBER PFANNENSTIEL: For solar.

DR. HAMMON: My experience is that they are. They're substantially lower in the new

construction side than retrofit. I think that's predominately due to the emergency of building integrated product, which has some cost savings; as well as the buying that you can get in new construction.

And I just want to add to that that new construction also gives you the real opportunity for distributed generation, which we're looking at with the Commission, through the zero energy new homes program.

ASSOCIATE MEMBER PFANNENSTIEL: How about the energy efficiency? Don't the new homes require smaller systems? Is that the case? Or is it the case that they're larger homes so they don't require smaller systems?

DR. HAMMON: We've been producing homes with relatively small systems, usually around 2 kW. And the reason they're smaller than in retrofit is that we do combine efficiency with the solar. It's a mistake to put solar on homes that are inefficient homes, especially new homes.

The opportunity exists, I think we've shown it's relatively new, we haven't done a lot of homes yet, but I think we've got some very good evidence that the solar provides the opportunity

to increase the market acceptance of energy efficiency well beyond what you can do with efficiency alone.

ASSOCIATE MEMBER PFANNENSTIEL: Thank you.

DR. HAMMON: Thank you.

PRESIDING MEMBER GEESMAN: Thanks very much. Anyone else care to address us? Mark?

MR. JOHNSON: Can I just make one point?

PRESIDING MEMBER GEESMAN: At the microphone.

MR. JOHNSON: Just as an example of where we are in panel supply today. The California Construction Authority put an RFP out a couple months ago for 4 megawatts over two years. And they received zero bids replies.

And so I know now they're struggling with trying to find out what they can do to meet that. That's for all the fairgrounds in the state. But out of that, all the four or top five manufacturers refused to put a bid in because they just couldn't support those projects.

PRESIDING MEMBER GEESMAN: Thank you. Anyone else?

Okay, we look forward to your written

comments by November 21st. And we will endeavor to get a Committee recommendation out shortly after the first of the year.

Thank you very much.

(Whereupon, at 10:40 a.m., the Committee Workshop was adjourned.)

--o0o--

CERTIFICATE OF REPORTER

I, PETER PETTY, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Committee Workshop; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said workshop, nor in any way interested in outcome of said workshop.

IN WITNESS WHEREOF, I have hereunto set my hand this 21st day of November, 2005.